INDEX TO VOL. XLIII.

A.

Amenity a Requisite to Success in the Gas Business, by E. Lindsley 59
Annual Banquets, in the Matter of, Western Association 59
*Atkinson's Differential Gas Engine 171
*Albo-Carbon Light 173
Australian Gas Light Company, New Works of the 204
Applications for Membership, American Association 227
Address of President, American Association 227

B.

Boring for Natural Gas at Cleveland, Ohio 122

C.

Candle Power of Arc Lamps, the Actual, by H. C. Adams 2
Casting, a Large Italian 8
Correspondence, Special English 9, 66, 121, 177, 232, 289
Cast Iron Mains Laid with Cement, How to Prevent Breaks in Same during Winter Seasons 35
Cooper's Coal Liming Process, by G. S. P 38
"Crinoline" Chimneys of the Cambria Iron Company 39
Cooper Coal Liming Process, by G. Shepard Page 63
Condensation; on the Elimination of Tar from Coal Gas, by A. B. Slater 65
"Chamberlain Gas," Results of a Trial with, by Frederic Egner 96
Coal Slag as a Building Material 120
Charges Made against the Columbus (Ohio) Gas Light Company, Mr. Emerson McMillin in Reply to the 174
*Combustion, the Effects of Heating Air upon 201
Committee on Invitation, American Association 227
Committee on President's Address, American Association 230
Coal vs. Coke in the Jarvis Furnace 231
Committee on Nominations, American Association 255
Committee on Place of Meeting, 1886, American Association 255
Cooper's Coal Liming Process, by R. P. Spice 287
Coals, Safe Sea-Carriage of 317

CORRESPONDENCE—

Allen-Harris Process, Mr. Allen Advertises the 263
Anæsthetic, Is It a Harmless? 320
Mr. Thurber, Does He Own Stock in a Burner Company? 320
Sidewalk Stopcocks 153

D.

Dinner and Adieus, Central New York Association 38
*Difficulties Encountered in the Construction of a Gasholder Tank, by E. McMillin 256

E.

Election of Officers, Central New York Association 8
Electing Mr. Harbison to Honorary Membership in Central New York Association 8
Examining the United States Patent Office Records, by F. Egner 147
Evaporation Tests, Comparative 178
Experiment in Gas Making, and the Results Thereof, by F. Egner 206
English Gas Engineer, Welcoming a Distinguished 227
Election of New Members, American Association 227
Executive Committee, Report of, American Association 235
Election of Officers, American Association 286
Exhibition of Gas Appliances, Proposing an 286

EDITORIALS—

Guild of Gas Managers, Combining Business with Pleasure 1
Consumers Company, of Chicago, Ills 2
McIlhenny's Experiments in the Direction of Improved Methods of Bench Firing 30
Electric Lighting at Lawrence, Mass 58
Disastrous Pleasure Trip 58
Death and Burial of a Hero 86
Lowe Incandescent Burner 86
"Novelties" Exhibition, the 113
Lowe Incandescent Burner, a Good Specimen of the 114
Chicago Gas Deal, the 114
New England Association, Semi-Annual Meeting of the 142
They "Punched" Out the Regulators 142
Resigned His Position 142
Obituary—Hartley, F. W 254
" Odlorne, Alfred 254
" Thompson, Hon. Francis 140
" Woodruff, Dr. E. B 198
"Dr. Robinson, of Columbus, Ohio" 170
Iowa Gas Association, Annual Meeting of the 170

EDITORIALS—*Continued.*

The Cincinnati Meeting 170
Do Your Duty 198
Report of Transactions, 1885 Meeting of the Gas Institute 198
The Meeting in Cincinnati 225
Gas Consumers Associations and the New York State Political Canvass 253
Gas-Heated Bakers' Ovens 254
Personal—Mr. E. Vanderpool 254
Public Electric Lighting in New York City 281
Friend Harbison was "Justified" 282
Not in Time 309
Appeal in Behalf of the Hartley Fund 309
Surprising News from Albany, New York 309
Important Decision, a Most 310

F.

Furnaces, Use of Steam in 8
Finance Committee, Report of, American Association 255
Formation of Coal 260

G.

Gas Appliances at the Parkes Museum 10
Gas Commissions, Report of Committee on Formation of, Western Association 59
Gas Bills vs. Gas Light, by Byron E. Chollar 62
Gas Commission for the State of Massachusetts, Text of Bill Creating a 92
Gas Engines of Large Power 98
*Gaseous Fuel 143

H.

Heating Regenerative Gas Furnaces by Radiation from Flame 148

I.

Iron Purifying Material, by E. H. Jenkins 6
Inspection and Luncheon, Central New York Association 8
Incandescent Gas Light, the Lowe 199
It is Well to Know what You are Buying 30
Incandescent Lamps, Review of the Report Made by Franklin Institute Committee on Duration and Efficiency of, by H. C. Adams 148
Items of Interest from Various Localities 12, 40, 67, 95, 123, 151, 178, 207, 234, 261, 290, 318

J.

Jarvis Furnace, Coal vs. Coke in the 231
Joint Discussion on the Somerville-Spice Papers, American Association 310

K.

Klonne Regenerative Furnaces at the Greenock Gas Works, the 118
Kendrick Incandescent Gas Lamp, the 200

L.

*Lungren Lamp, the New 173
Lowe Gas Processes, the 199
Lowe Manufacturing Company's General Exhibit at the "Novelties" Exhibition 199
Lined Coal, the Results of a Month's Working with, by Jas. Somerville 286

M.

Miscellaneous Exhibits at the "Novelties" Exhibition 230
Market for Gas Securities, the 2, 41, 70, 86, 114, 142, 170, 198, 225, 254, 282, 310

N.

Natural Gas 8
New Plant of the Syracuse (N. Y.) Gas Light Company 37
Naming Place to Hold '86 Meeting of Western Association 59
Natural Gas, by E. McMillin 88
Natural Gas: Its Relation to the Gas Interest Generally, by J. M. Critchlow 115
Natural Gas in Plate Glass Manufacture 120
*"Novelties" Exhibition at Phila., Pa., Some Notes on the, by H. C. Adams 172, 199, 230
Natural Gas, Report of the Pittsburgh Commission on 231
New Members, American Association 227
Natural Gas, by W. H. Denniston 282
"Novelties" Exhibition, Receipts at the 282

O.

OFFICIAL NOTICES, ETC.—

American Gas Light Association 29, 141, 169, 197
Iowa Gas Association 57, 85, 113
New England Association of Gas Engineers 85

OFFICIAL REPORTS—

VII. Annual Meeting, Western Gas Association—Concluded from Vol. XLII., page 815 ..... 3, 32, 59, 87, 115
VI. Annual Meeting, Central New York Gas Engineers' Association 7, 37
XIII. Annual Meeting American Gas Light Association 227 255, 282, 310

P.

*Pressure of Gas in Street Mains, by G. A. Hyde, sr 3
Programme of the Session, Central New York Association .. 8
Paint and Varnish, Removal of 11
Pressure in Elevated Districts, Regulation of 94
Pyrometers 98
Patents in Belgium and Austro-Hungary 126
Paper Made from Seaweed 150
Patents, Recent American 153
Peruvian Petroleum Fields 205
Pittsburgh Commission on Natural Gas, Report of 231
President's Address, American Association 227
Past and Present State of Gas Lighting in Scotland 233
Poisoning by Illuminating Gas 260
Proposition to Change Time of Holding Annual Meeting, American Association 286
Present State of the Gas Interest, by Jno. T. Pratt 312

Q.

Question-Box, Western Association 5
Question-Box, Ordered by Central New York Association ... 8

R.

Roll Call, Central New York Association 7
Resting Business, Central New York Association 7
Removal of Paint and Varnish 11
Refrigerating Machines 98
Regenerative Furnaces, the Klonne 118
Regenerative Gas Furnaces, on Heating by Radiation from Flame 148
Relation of Steam Power to Electric Lighting 150
Roll Call, American Association 255

S.

Steam in Furnaces, the Use of, by A. C. Wood 8
Stoppages in Small Gas Works, by V. L. Elbert 32
Syracuse (N. Y.) Gas Light Company, New Plant of the 37
Servier, the Late M 38
Sulphate of Ammonia, Use of as a Manure 67
Something Curious 98
Stopcocks and Sidewalk Boxes: Is it Necessary to Employ Same where Make or Output Reaches 30,000 cubic feet per Diem? 117
Steam Power, Relation of to Electric Lighting 150
Stevens Battery, Something about the 151
Siemens Lamps at the "Novelties" Exhibition 173
Scotch Gas Lighting, Past and Present State of 233
Secretary's Report, American Association 255
Stoking Machinery, by M. S. Greenough 316

T.

Testing Coal for its Producing Qualities 10
Train Lighting 11
*Thermophote, or Self-Registering Photometer 31
Treasurer's Report, Western Association 59
Tar Fuel as Compared with Coke, Concerning Yield per Retort, and Life of Same 34
This and That from Europe 117
Technical Journalism 122
Test was Made, the 200
Treasurer's Report, American Association 255
Three-Hour Charges, by A. B. Slater 288

V.

Votes of Thanks, Western Association 118
Vincennes (Ind.) Gas Light Company, Annual Election 142

W.

Waste Heat from Benches, Utilization of, by J. W. Dunbar. 6
Wasserman Lamp, the 174
*Wilbraham Gas Exhauster, the 230

INDEX TO VOL. XLIII.

A.

Amenity a Requisite to Success in the Gas Business, by E. Lindsley 59
Annual Banquets, in the Matter of, Western Association 59
*Atkinson's Differential Gas Engine 171
*Albo-Carbon Light 173
Australian Gas Light Company, New Works of the 204
Applications for Membership, American Association 227
Address of President, American Association 227

B.

Boring for Natural Gas at Cleveland, Ohio 122

C.

Candle Power of Arc Lamps, the Actual, by H. C. Adams 2
Casting, a Large Italian 8
Correspondence, Special English 9, 66, 121, 177, 232, 289
Cast Iron Mains Laid with Cement, How to Prevent Breaks in Same during Winter Seasons 35
Cooper's Coal Liming Process, by G. S. P 38
"Crinoline" Chimneys of the Cambria Iron Company 39
Cooper Coal Liming Process, by G. Shepard Page 63
Condensation; on the Elimination of Tar from Coal Gas, by A. B. Slater 65
"Chamberlain Gas," Results of a Trial with, by Frederic Egner 96
Coal Slag as a Building Material 120
Charges Made against the Columbus (Ohio) Gas Light Company, Mr. Emerson McMillin in Reply to the 174
*Combustion, the Effects of Heating Air upon 201
Committee on Invitation, American Association 227
Committee on President's Address, American Association 230
Coal vs. Coke in the Jarvis Furnace 231
Committee on Nominations, American Association 255
Committee on Place of Meeting, 1886, American Association 255
Cooper's Coal Liming Process, by R. P. Spice 287
Coals, Safe Sea-Carriage of 317

CORRESPONDENCE—

Allen-Harris Process, Mr. Allen Advertises the 263
Anæsthetic, Is It a Harmless? 320
Mr. Thurber, Does He Own Stock in a Burner Company? 320
Sidewalk Stopcocks 153

D.

Dinner and Adieus, Central New York Association 38
*Difficulties Encountered in the Construction of a Gasholder Tank, by E. McMillin 256

E.

Election of Officers, Central New York Association 8
Electing Mr. Harbison to Honorary Membership in Central New York Association 8
Examining the United States Patent Office Records, by F. Egner 147
Evaporation Tests, Comparative 178
Experiment in Gas Making, and the Results Thereof, by F. Egner 206
English Gas Engineer, Welcoming a Distinguished 227
Election of New Members, American Association 227
Executive Committee, Report of, American Association 235
Election of Officers, American Association 286
Exhibition of Gas Appliances, Proposing an 286

EDITORIALS—

Guild of Gas Managers, Combining Business with Pleasure 1
Consumers Company, of Chicago, Ills 2
McIlhenny's Experiments in the Direction of Improved Methods of Bench Firing 30
Electric Lighting at Lawrence, Mass 58
Disastrous Pleasure Trip 58
Death and Burial of a Hero 86
Lowe Incandescent Burner 86
"Novelties" Exhibition, the 113
Lowe Incandescent Burner, a Good Specimen of the 114
Chicago Gas Deal, the 114
New England Association, Semi-Annual Meeting of the 142
They "Punched" Out the Regulators 142
Resigned His Position 142
Obituary—Hartley, F. W 254
" Odlorne, Alfred 254
" Thompson, Hon. Francis 140
" Woodruff, Dr. E. B 198
"Dr. Robinson, of Columbus, Ohio" 170
Iowa Gas Association, Annual Meeting of the 170

EDITORIALS—*Continued.*

The Cincinnati Meeting 170
Do Your Duty 198
Report of Transactions, 1885 Meeting of the Gas Institute 198
The Meeting in Cincinnati 225
Gas Consumers Associations and the New York State Political Canvass 253
Gas-Heated Bakers' Ovens 254
Personal—Mr. E. Vanderpool 254
Public Electric Lighting in New York City 281
Friend Harbison was "Justified" 282
Not in Time 309
Appeal in Behalf of the Hartley Fund 309
Surprising News from Albany, New York 309
Important Decision, a Most 310

F.

Furnaces, Use of Steam in 8
Finance Committee, Report of, American Association 255
Formation of Coal 260

G.

Gas Appliances at the Parkes Museum 10
Gas Commissions, Report of Committee on Formation of, Western Association 59
Gas Bills vs. Gas Light, by Byron E. Chollar 62
Gas Commission for the State of Massachusetts, Text of Bill Creating a 92
Gas Engines of Large Power 98
*Gaseous Fuel 143

H.

Heating Regenerative Gas Furnaces by Radiation from Flame 148

I.

Iron Purifying Material, by E. H. Jenkins 6
Inspection and Luncheon, Central New York Association 8
Incandescent Gas Light, the Lowe 199
It is Well to Know what You are Buying 30
Incandescent Lamps, Review of the Report Made by Franklin Institute Committee on Duration and Efficiency of, by H. C. Adams 148
Items of Interest from Various Localities 12, 40, 67, 95, 123, 151, 178, 207, 234, 261, 290, 318

J.

Jarvis Furnace, Coal vs. Coke in the 231
Joint Discussion on the Somerville-Spice Papers, American Association 310

K.

Klonne Regenerative Furnaces at the Greenock Gas Works, the 118
Kendrick Incandescent Gas Lamp, the 200

L.

*Lungren Lamp, the New 173
Lowe Gas Processes, the 199
Lowe Manufacturing Company's General Exhibit at the "Novelties" Exhibition 199
Lined Coal, the Results of a Month's Working with, by Jas. Somerville 286

M.

Miscellaneous Exhibits at the "Novelties" Exhibition 230
Market for Gas Securities, the 2, 41, 70, 86, 114, 142, 170, 198, 225, 254, 282, 310

N.

Natural Gas 8
New Plant of the Syracuse (N. Y.) Gas Light Company 37
Naming Place to Hold '86 Meeting of Western Association 59
Natural Gas, by E. McMillin 88
Natural Gas: Its Relation to the Gas Interest Generally, by J. M. Critchlow 115
Natural Gas in Plate Glass Manufacture 120
*"Novelties" Exhibition at Phila., Pa., Some Notes on the, by H. C. Adams 172, 199, 230
Natural Gas, Report of the Pittsburgh Commission on 231
New Members, American Association 227
Natural Gas, by W. H. Denniston 282
"Novelties" Exhibition, Receipts at the 282

O.

OFFICIAL NOTICES, ETC.—

American Gas Light Association 29, 141, 169, 197
Iowa Gas Association 57, 85, 113
New England Association of Gas Engineers 85

OFFICIAL REPORTS—

VII. Annual Meeting, Western Gas Association—Concluded from Vol. XLII., page 815 ..... 3, 32, 59, 87, 115
VI. Annual Meeting, Central New York Gas Engineers' Association 7, 37
XIII. Annual Meeting American Gas Light Association 227 255, 282, 310

P.

*Pressure of Gas in Street Mains, by G. A. Hyde, sr 3
Programme of the Session, Central New York Association .. 8
Paint and Varnish, Removal of 11
Pressure in Elevated Districts, Regulation of 94
Pyrometers 98
Patents in Belgium and Austro-Hungary 126
Paper Made from Seaweed 150
Patents, Recent American 153
Peruvian Petroleum Fields 205
Pittsburgh Commission on Natural Gas, Report of 231
President's Address, American Association 227
Past and Present State of Gas Lighting in Scotland 233
Poisoning by Illuminating Gas 260
Proposition to Change Time of Holding Annual Meeting, American Association 286
Present State of the Gas Interest, by Jno. T. Pratt 312

Q.

Question-Box, Western Association 5
Question-Box, Ordered by Central New York Association ... 8

R.

Roll Call, Central New York Association 7
Resting Business, Central New York Association 7
Removal of Paint and Varnish 11
Refrigerating Machines 98
Regenerative Furnaces, the Klonne 118
Regenerative Gas Furnaces, on Heating by Radiation from Flame 148
Relation of Steam Power to Electric Lighting 150
Roll Call, American Association 255

S.

Steam in Furnaces, the Use of, by A. C. Wood 8
Stoppages in Small Gas Works, by V. L. Elbert 32
Syracuse (N. Y.) Gas Light Company, New Plant of the 37
Servier, the Late M 38
Sulphate of Ammonia, Use of as a Manure 67
Something Curious 98
Stopcocks and Sidewalk Boxes: Is it Necessary to Employ Same where Make or Output Reaches 30,000 cubic feet per Diem? 117
Steam Power, Relation of to Electric Lighting 150
Stevens Battery, Something about the 151
Siemens Lamps at the "Novelties" Exhibition 173
Scotch Gas Lighting, Past and Present State of 233
Secretary's Report, American Association 255
Stoking Machinery, by M. S. Greenough 316

T.

Testing Coal for its Producing Qualities 10
Train Lighting 11
*Thermophote, or Self-Registering Photometer 31
Treasurer's Report, Western Association 59
Tar Fuel as Compared with Coke, Concerning Yield per Retort, and Life of Same 34
This and That from Europe 117
Technical Journalism 122
Test was Made, the 200
Treasurer's Report, American Association 255
Three-Hour Charges, by A. B. Slater 288

V.

Votes of Thanks, Western Association 118
Vincennes (Ind.) Gas Light Company, Annual Election 142

W.

Waste Heat from Benches, Utilization of, by J. W. Dunbar. 6
Wasserman Lamp, the 174
*Wilbraham Gas Exhauster, the 230